



02-10-05

PTO/SB/21 (04-04)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

IPW

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

		Application Number	10/612,661
		Filing Date	July 2, 2003
		First Named Inventor	Jong-Hwan Lee
		Art Unit	3748
		Examiner Name	Binh Q. Tran
Total Number of Pages in This Submission		Attorney Docket Number	GP-303538 (8540R-000041)

ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to Technology Center (TC)
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment / Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) <i>(please identify below):</i>
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	Restriction Requirement; and Return Postcard Receipt
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Certified Copy of Priority Document(s)		
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

Remarks

The Commissioner is hereby authorized to charge any additional fees that may be required under 37 CFR 1.16 or 1.17 to Deposit Account No. 07-0960. A duplicate copy of this sheet is enclosed.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Harness, Dickey & Pierce, P.L.C.	Attorney Name Mark A. Frentrup	Reg. No. 41,026
Signature	<i>Mark A. Frentrup</i>		
Date	Feb 9, 2005		

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name	Mark A. Frentrup	Express Mail Label No.	EV 570 162 975 US (2/9/2005)
Signature	<i>Mark A. Frentrup</i>	Date	2/9/2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

EV 570 162 975 US



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/612,661

Filing Date: July 2, 2003

Applicant: Jong-Hwan Lee

Group Art Unit: 3748

Examiner: Binh Q. Tran

Title: PARTIAL OXIDATION OF ALCOHOLS

Attorney Docket: GP-303538 (HDP 8540R-000041)

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Reply to Restriction Requirement

Sir:

In response to the Requirement for Restriction mailed January 26, 2005, Applicants elect Group II (claims 22-28 drawn to a method of lowering NO_x emissions) with traverse.

Although Inventions I, II and III are patentably distinct, they are related in that they are disclosed as capable of use together. In part, the invention is based on the discovery that certain catalysts efficiently oxidize an alcohol partially to an aldehyde or ketone. Claims 1-13 and claims 14-21 disclose methods of partially oxidizing alcohol to an aldehyde or ketone with special applications to the partial reduction of ethanol to acetaldehyde. Claims 22-30 and 31-38 are drawn to methods of lowering NO_x emissions by carrying out the partial oxidation method of claims 1-21, and combining

the reaction product with exhaust gas upstream of a catalytic converter. Claim 39-48 recite a control system for NO_x reduction containing an internal combustion engine that produces exhaust gas and a catalytic converter. The control system further contains a source of ethanol and an oxidizing catalyst assembly that is capable of carrying out the reduction method of claims 1-21. The function of the control system of claims 39-48 is to provide a system for carrying out the methods of lowering NO_x emissions as recited in claims 22-38.

On the basis of the above discussion, it is seen that the Inventions I, II, and III are described as capable of use together. Accordingly, Applicants respectfully request that the Examiner withdraw the Restriction Requirement and examine the three inventions together.

The Examiner is invited to telephone the undersigned Applicants representative if that would be helpful to resolving any issues.

Respectfully submitted,

Dated: 2/9/2005

By: Mark A. Frentrup
Mark A. Frentrup
Reg. No. 41,026

CORRESPONDENCE ADDRESS:
Kathryn A. Marra
General Motors Corporation
Legal Staff - Mail Code 482-C23-B21
PO Box 300 - 300 Renaissance Center
Detroit, Michigan 48265-3000
Ph: 313-665-4708
Fax: 313-665-4976

MAF/cg